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RETHINKING ARCHITECTURAL DESIGN
STUDIO EDUCATION IN GLOBAL ERA

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ABSTRACT

This study was aimed to review the materials and education methods in architectural design studio in the context of global developments that are so rapidly changing. This issue becomes important to be put forward and studied more in depth in order to prepared material and education methods that was not only to create a new form, but at the same time have a broad cultural based. The method used in this study first of all, examined theoretical studies on approaches that are relevant to the design process. These approaches then formulated to be a new approach as well as how to apply it in architectural design studio education. Based on the results of the analysis can be traced that in the education of architectural design studio it took three tiered stages in line with the level of comprehensiveness. The first stage is the understanding of perceptual expression of elements and arrangement of architectural elements. The second stage is the understanding that in each element and the arrangement of the elements of architectural expression has always adhered by cultural references. The third stage is the understanding of the expression symbolism and language that contributed to the programming functions and the formulation of architectural formation. The research concluded that education architecture studio recently must incorporate elements of ideology, tradition and wider culture in order to contribute to the change in an increasingly globalization world.

Key words: expression, elemental, perceptual, cultural, symbolical

1. INTRODUCTION

There are always two important aspects that influence in a changed things. Changes caused by external factors more commonly known as globalization and changes due to internal pressure, better known by the term localization. [1,2] The change itself is important, because without changes everything will become stagnant. Without changes there would be no progress. Changes will make the civilization more advanced, but at the same time changes can also make civilization decline.

Along the way, the changes that caused by information technology triggered the changes in other areas globally. Architecture included the fields that are also affected by the pressures of globalization. At first these changes occurred in the practice of architecture because of the invention of new construction technology and materials. [3,4] In architecture it is important and interesting to be discussed is: how these changes had an impact on architectural design studio education.

The phenomenon of architectural practice in Indonesia is still likely to be affected by a universal-style architecture, especially in big cities in Indonesia. [5] These practices impact on the architectural design studio education in universities. Modernism that tend to be based on a very pragmatic value is still the main basis of education in the studio of architecture in most universities in Indonesia. Though already quite a lot of literatures that denounced the failure of modernism's education. [6,7]

The issues of architectural design studio education which is the backbone of architectural knowledge education would be very interesting if it is positioned into the global context and the issue of locality. This issue is very important to put forward and studied more deeply in order to be used as design strategies which spawned a new form that fits with the context of global technological advances and at the same time still have a local cultural identity. [8] Departing from the above description, this study did a search on the education of architectural design studio. This study put a new perspective regarding alternative materials and methods of education at the architectural design studio.

The benefits of this research were: Firstly, a deep understanding of architectural design studio education that based on a synthesis of global and local culture. Secondly, an understanding of education methods and their application at the same time. Thirdly, understanding the importance of education positions in the practice of architecture design studio. Fourthly, understanding the importance of architectural design studio education positions in the context of globalization.

2. MATERIALS AND METHODS

This study discussed some of the important theories that support the analysis. The theories that used as a case studies purposefully determined on three criteria: Firstly, the theory of architecture that focused on the study of the design process. Secondly, the theory that explored aspects and architectural elements. Thirdly, these theories were written theories, which contains a detailed subject argument. Thus it was not a theory that did not equipped with a detailed explanation as is often found in a book that is as potpourri.

Based on the above three criteria, theories chosen were as follows: Firstly, the theory of the rotation of four-step process architecture which was: making-using-experiencing-understanding architecture [9]. Secondly, the theory of architectural aspects & elements and also the rotation function-form-meaning [10]. Based on the discussion of theory of architectural process and the relationship of architectural aspects, then put forward a proposal concept of architectural design studio education. This concept consists of three stages of development of a tiered cumulative. This concept also
outlined its aspects, its operation that is accompanied by the arguments. Thus the proposed concept contained details of its aspects as well as explained its operationalization steps.

3. RESULTS AND DISCUSSION

The Rotation Process of Architecture

In his book *Architect* 

Klassend [11] which described architecture from the view of a phenomenology, Klassend emphasized three processes, named: making-experiencing-understanding. The processes was based on philosophical discourse to read architecture. In the contrast to Klassend, Salura filed rotation of four processes: making-using-experiencing-understanding which is the basic process that must be understood in the education of architecture, especially in the studio.

At first, this process started from making buildings. Each activity to make architecture or building always aimed to be used by man. Without aspects of usability, the result of man-made is believed to be difficult to be referred to as a work of architecture. After the building was used and experienced in quite a long period of time, users could begin to understand the nature and the advantages and disadvantages of the building. In this process its building performance which was based on a particular concept can be understood in depth. Based on the rotation of the process using-experiencing-understanding will be designed (making) again the building or architecture which has a better value.

The substance of the thesis of this book emphasized that at the architectural design studio, the education should include the four steps of architecture process. This is because four of this process can not be separated from one another. The four steps process was always mutually concatenated and very closely related. The consequence is, any task that is given in the studio, its solution can not be separated from these steps. The four steps process which are important: construction, form, function and context. This is because the emphasis each process can be different. Likewise, the early start of a process could be different as far as the direction of rotation of the process is still the same. For example, at a basic level or in a semester 1-2 in which the emphasis is on experiencing and understanding, the process can be started from the experiencing steps. While in a semester 5-6 which its emphasis was on understanding and making, the process could be started from understanding steps.

The Rotation of the Aspects of Function-Form-Meaning

In his book Architectural Theory, Volume 1 & 2 he very interesting and inspiring study. He put forward the basic principles of the theory of architecture which developed through primary and secondary categories in architecture. The primary categories were elements of Function-Form-Meaning, while the secondary categories were Context-Way / Spirit. If depicted in the circle cut by three-line through its center, there will be six segments. Each of the line on the circle to the opposite end is the pair categories: Construction and Form, Function and Context and Meaning and Way / Spirit.

Meanwhile Salura put forward the aspects and elements of architecture. Departing from the thesis that the basic nature of each object as well as the architecture is always composed of: Idea-Medium-Expression. Idea is a purpose why is the objects exist in the world. Expression is a display of its idea. The idea and its expression always required a medium to be existed. Thus if the idea was accommodated by a medium then the expression of its idea could be appeared. [13]

In line with this thesis, to make an analogy to architecture, the three main aspects of the architecture is the aspect of function as the idea, Form as the medium and Meaning as the expression. While the elements of architecture were the enclosure of the building, namely: floor, wall and roof. This is in line with the thesis of Thiss Thomas Evensen which was detailing these three elements very carefully through the phenomenological approach also seems consistent with the approach of Norberg-Schulz. [14, 15]

Furthermore Salura described the rotation three aspects of architecture above. A number of activities (functions) are likely to structure a particular grouping of space (zoning) and the direction of motion in order to achieve efficiency. The structure of space and movement was what is covered by the enclosure of the building that was consisted of the arrangement of elements floors, walls, roofs. The form in which already encompasses space for a specific function was definitely displayed its expressions that was captured by the human senses. Expression is then could be interpreted by the user and observer. [16]

The important thing to be learned from the substance of this thesis was the notion that for education architectural design in the studio, the expression of activity, the expression of form and the rotation between the two becomes very important to promote. By understanding these expressions, designer could communicate through architectural form and formations to users and observers. Thus designer’s intention at the first place will be correctly understood by the users and observers.

Education Stages in Architectural Studio

Based on the above approaches, this paper proposed materials that needs to be taught in 6 to 8 semesters in the architecture studio. The Architectural Design Studio proposed into three main stages.

Basic Architectural Design Studio.

The aim at this stage is to provide an understanding of the very fundamental architectural language. In the early stages of designing, language is the main tool in designing architecture. If we communicated with each other orally, it was then the expression of sound with the dynamics of sound. The dynamics of the sound expression that brought the message to the other person. If the other person understood the dynamics of expression or the expression of the spoken language, then the message will be meaningful to the listener.

The same analogy applied to music. If one did not understand the differences in tone of sound and how to use the instrument, one will undoubtedly be difficult to express the sound of the music that he wanted to express. Similarly, in the field of architecture. Without the deep understanding of the expression posed by the building elements and its composition, a designer will be very difficult to communicate to the user or the building observers. The message or purpose such as: “This is the door”, “It is a reading room”, “This wall is boundary is transparent”. Or even to the level of the building, such as: “This building is a monumental building”, “This building is a building that invites and receives”. All of which will be communicated directly to users and observers through the expression of a building if the designer mastering the building language fluently.
Expression of this building was created by: firstly, the very basic conditions of the elements itself (i.e. column, wall) and its attributes (eg color, texture); secondly, the arrangement or composition created by the combined elements of columns, walls and roofs. The very basic perceptual expression (universal) is used as essence of visual foundation.

Students are taught to understand why a building (element composition and structure) has invited expressions. Furthermore students are taught to understand what is the concept of inviting on the building. For example: the concept of inviting is: that there should have a (perception) space between the observers and the entrance if you want to get invited expressions. With these basic concepts, the students could design a variety of different forms (composition and arrangement of elements) even with the same theme (inviting) expression.

If the student has mastered the language of architectural elements through perceptual observation or profound observation, then students were asked to design a building with a particular function. Students were required to declare the expression of a particular function, then to how integrate the functionality expression into a building design (elements and arrangement of elements). Thus the students will be proficient to design a building that will display the basic perceptual expressions. Perceptual fundamental expression is believed to be likely to apply universally.

Assessment tool that determines whether a composition element will be significantly better or not, is the concept of the "ordering principles". In general, the concept is based on the basic philosophy of the aspect of balance and the aspect of orientation that are abstracted from human and nature. Because it referred to the principle that in humans and nature, the principle of this arrangement will always be in line with the universal perceptual approach.

It is known that the basic philosophy of balance requires the parts and the whole. From here then formulated the paired principles of: mata-datum, repetition-rhythm, transformation-change. While the basic philosophical orientation has always demanded a hierarchy. From here then formulated the paired principles of: top-down, rear-face, far-near, large-small.

Development Architectural Design Studio

Once students understood the language of architectural elements, and have been able to design using the concept of effective expression of architectural elements, then the students were introduced to the stage of development of the architectural design studio. It is believed that architecture can not be separated from notions of thought or ideology that created by human. The ideology that ranging from very traditional to sharp modern are always determined its attitude towards nature which is: followed, explored, or conquered nature. Similarly, an ideology will always took a stand against the existing social life. Attitude towards the natural and social conditions will determined the physical form of architecture. The whole effort to address life in the world is what is often referred to as a culture. Thus architecture can be said to represent the spatial dimension of culture, because the architecture or the building itself was the physical result of a construct were based on notions of thought that adopted at a given time.

The objective of this stage of this studio is to provide an understanding that the functions and forms of architecture were no longer merely born of universal human perception, but also at the same time due to the result of human struggle with notions of thought and tradition that took place at the time. Thus the expression of its elements and the composition of the existing architecture that contained perceptual universal value, also attached to the customs, traditions, as well as certain ideology embraced by society inside it.

At this point students begin expanded their horizons of the existence of diverse traditions. It is understood that a layout of the room in a house is not only influenced by the pragmatic needs alone but also by tradition and culture. Sometimes the element of tradition could become a more stronger influence than its pragmatic needs. The room for the tea ceremony in one region may be different from the shape and arrangement of elements with a tea room in other areas. Through the whole process of using-experiencing-understanding that based on tradition and culture, students are slowly but profound begin to make architecture with a full variety of considerations.

Thus language of architectural elements that had been mastered will be richer. Students will understand better what is the differences between perceptual expressions form expressions that are created as a result of their backgrounds and cultural traditions. Students will be aware that there were other references that will determine the composition and function of perception perceptual forms other than universal. Students begin to understand that the column did not necessarily have to function as the structure and construction. The walls did not always function as insulation only. The enclosure element of space began to have more roles than just one role. Thus the dominant expression was no longer just rely on perceptual logic alone.

The Aspects of meaning of the building's elements expression and its attributes began to spread. Building elements can be wrapped into an attribute and also be filled with it. Furthermore, at this stage the students will be filled with the knowledge of awareness of their own tradition and culture. How the strengths and weaknesses of their existed culture compared to other cultures. Thus the process of becoming attuned in their own culture and environment will not be happened. Students were taught to think analytically and be "responsible for his own culture.

Advanced Architectural Studio

Hypothetical results expected from the previous stage were students in full control of the expression form language that is created from architectural elements and at the same perceptual expression form language from cultural and ideological references. In the next phase the students were introduced to an expression form language that was created by a symbol. If the perceptual expression tends to follow the logic, and cultural expression based itself on tradition and cultural formation, the symbolic expression instead created as a result of an agreement or convention that has nothing to do with the expression (perceptual and cultural) previously.

It was known that the letters in a word and also in a sentence is the symbol agreed by the community. The word or phrase can be understood by the community because of the agreement or convention. Coverage of this convention could not be applied to small scope, but the convention could also be applied on the wider scope such as the world scope.

It was believed that the convention in our life was not only applied to numbers and letters, but also applied to a belief or a religion. Each religion was consciously and subconsciously at the same time had a convention on how it rituals held. The understanding of this convention that continuously created and changed over time will definitely make the students more mature.

It could be understood how the convention could have a positive influence as well as negative one depending on the context and purpose. Suppose there is a convention that is not consistent with its context and continuously produced and
forced-enacted in the context, of course it was not necessarily be rejected. But must be understood and addressed with knowledge wisely.

By knowing all layers existing expressions, students were expected to be able to design with full awareness and critical attitude towards design. Three stages of this architectural design studio education if continuously refined and understood in depth will produce students who have the ability to design with existential-expression and new poetic-expression that will enrich the development of the architectural knowledge itself. Even more the students will be able to have a positive influence on the development of their own culture.

Presented below an outline of form of thought of architectural design studio education in the form of a diagram:

Diagram 01. Out line of Architectural design Studio Education

4. CONCLUSION

Based on the results of the analysis it could be concluded that:

Firstly, the architectural design studio education should be evaluated continuously by providing novelty involves understanding perceptual-expression, expression-based on tradition and culture, expression based on particular and universal convention

Secondly, the architectural design education could be understood in detail by creating the three stages of studio, namely: Basic Architectural Design Studio, Development Architectural Design Studio, Advanced Architectural Design Studio

Thirdly, architectural design studio education that continuously evaluated and improved will be a very important thing that could influenced the quality of the design practice in the real world.

Fourthly, architectural design studio education put forward in this paper posited the rationale for strengthening the resilience and sovereign of culture in global conditions that always changing.

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